

Unit 2: Atomic Structure

Constructing Atoms

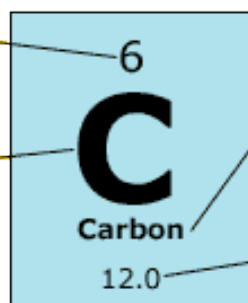
Atomic Number – Represents the number of _____

*** The number of protons determines the element

Atomic Number: the number of protons in the nucleus (which is the same as the number of electrons in the atom).

Symbol: a one or two letter symbol that represents the element. These internationally-used symbols are abbreviations for the common name or the Latin name of the element.

Elements are listed in order of increasing atomic number.



Name: the element's common name.

Atomic Mass: the mass of an atom of that element.

Note: Since atoms are _____ the number of protons equals the number of electrons in an atom.

Atomic Mass – Represents the number of protons + neutrons

Note: the # of neutrons = (_____) – (_____)

Sample Problem: Calculate the number of protons, electrons, and neutrons in each of these atoms:

Li

Ni

U

Na

Charges:

Proton: _____

Neutron: _____

Electron: _____

Location:

Proton: _____

Neutron: _____

Electron: _____

Bohr Model (not exactly how things are but good enough...for now)

Protons and neutrons are in the _____

Electrons are in _____

Each shell can only hold a certain number of electrons:

1st shell: _____

2nd shell: _____

3rd shell: _____

Note: The outer shell cannot have more than 8 electrons

Draw a nucleus (show protons and electrons) and put electrons in shells:

Li C

Cl